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WHAT IS CLAIMED IS:

1. A laser irradiation apparatus comprising:

a laser oscillator,

an optical system to convert a laser light emitted from the laser oscillator so that a beam spot on a surface to be irradiated becomes a line shape or an elliptical shape; and

a means for controlling a scanning speed of the converted laser light.

2. A laser irradiation apparatus according to claim 1, wherein the scanning speed of the laser light is determined based on an energy distribution obtained by a means for focusing the laser light.

3. A laser irradiation apparatus according to claim 1, wherein the scanning speed of the laser light is controlled to homogenize an irradiation energy on the surface to be irradiated.

4. A laser irradiation apparatus according to claim 1, wherein an irradiation position of the beam spot is controlled to scan a specific position on the surface to be irradiated.

5. A laser irradiation apparatus according to claim 1, wherein the laser oscillator is a continuous oscillation solid laser.

6. A laser irradiation apparatus according to claim 1, wherein the laser oscillator is at least one selected from the group consisting of a continuous oscillation YAG laser, YVO_4 laser, YLF laser, $YAlO_3$ laser, Y_2O_3 laser, Alexandrite laser, and Ti: Sapphire laser.

7. A laser irradiation apparatus according to claim 1, wherein the laser

oscillator is one of a continuous oscillation Ar laser and Kr laser.

8. A laser irradiation apparatus according to claim 1, wherein the laser light is a harmonic wave.

9. A laser irradiation apparatus comprising:

a laser oscillator;

an optical system to convert a laser light emitted from the laser oscillator so that a beam spot on a surface to be irradiated becomes a line shape or an elliptical shape;

a means for scanning while keeping a shape of the converted laser light on the surface to be irradiated constant; and

a means for controlling a scanning speed of the scanning means.

10. A laser irradiation apparatus according to claim 9, wherein the shape of the laser light is kept constant by adjusting a focal point of the laser light on the surface to be irradiated.

11. A laser irradiation apparatus according to claim 9, wherein the scanning speed of the laser light is determined based on an energy distribution obtained by a means for focusing the laser light.

12. A laser irradiation apparatus according to claim 9, wherein the scanning speed of the laser light is controlled to homogenize an irradiation energy on the surface to be irradiated.

13. A laser irradiation apparatus according to claim 9, wherein an irradiation position of the beam spot is controlled to scan a specific position on the surface to be irradiated.

14. A laser irradiation apparatus according to claim 9, wherein the laser oscillator is a continuous oscillation solid laser.

15. A laser irradiation apparatus according to claim 9, wherein the laser oscillator is at least one selected from the group consisting of a continuous oscillation YAG laser, YVO_4 laser, YLF laser, $YAlO_3$ laser, Y_2O_3 laser, Alexandrite laser, and Ti: Sapphire laser.

16. A laser irradiation apparatus according to claim 9, wherein the laser oscillator is one of a continuous oscillation Ar laser and Kr laser.

17. A laser irradiation apparatus according to claim 9, wherein the laser light is a harmonic wave.

18. A laser irradiation apparatus comprising:

a laser oscillator;

an optical system to convert a laser light emitted from the laser oscillator so that a beam spot on a surface to be irradiated becomes a line shape or an elliptical shape;

a means for deflecting the converted laser light and scanning while keeping a shape of the deflected laser light on the surface to be irradiated constant; and

a means for controlling a scanning speed of the converted laser light by controlling an operation speed of the deflecting means.

19. A laser irradiation apparatus according to claim 18, wherein the means for deflecting the converted laser light and scanning while keeping the shape of the deflected laser light on the surface to be irradiated constant has at least one of a galvanometer mirror, a polygon mirror, an fθ lens and a telecentric fθ lens.

20. A laser irradiation apparatus according to claim 18, wherein the shape

of the laser light is kept constant by adjusting a focal point of the laser light on the surface to be irradiated.

21. A laser irradiation apparatus according to claim 18, wherein the scanning speed of the laser light is determined based on an energy distribution obtained by a means for focusing the laser light.

22. A laser irradiation apparatus according to claim 18, wherein the scanning speed of the laser light is controlled to homogenize an irradiation energy on the surface to be irradiated.

23. A laser irradiation apparatus according to claim 18, wherein an irradiation position of the beam spot is controlled to scan a specific position on the surface to be irradiated.

24. A laser irradiation apparatus according to claim 18, wherein the laser oscillator is a continuous oscillation solid laser.

25. A laser irradiation apparatus according to claim 18, wherein the laser oscillator is at least one selected from the group consisting of a continuous oscillation YAG laser, YVO_4 laser, YLF laser, $YAlO_3$ laser, Y_2O_3 laser, Alexandrite laser, and Ti: Sapphire laser.

26. A laser irradiation apparatus according to claim 18, wherein the laser oscillator is one of a continuous oscillation Ar laser and Kr laser.

27. A laser irradiation apparatus according to claim 18, wherein the laser light is a harmonic wave.

28. A method of manufacturing a semiconductor device comprising:

forming an amorphous semiconductor film over a substrate; and

scanning a surface of the amorphous semiconductor film with a laser light whose beam spot on the surface to be irradiated has a line shape or elliptical shape beam spot;

wherein a scanning speed of the laser light is changed.

29. A method of manufacturing a semiconductor device according to claim 28, wherein the scanning speed of the laser light is determined based on an energy distribution obtained by a means for focusing the laser light.

30. A method of manufacturing a semiconductor device according to claim 28, wherein the scanning speed of the laser light is changed so that an irradiation energy on the surface to be irradiated is homogenized.

31. A method of manufacturing a semiconductor device according to claim 28, wherein the laser oscillator is a continuous oscillation solid laser.

32. A method of manufacturing a semiconductor device according to claim 28, wherein the laser oscillator is at least one selected from the group consisting of a continuous oscillation YAG laser, YVO_4 laser, YLF laser, $YAlO_3$ laser, Y_2O_3 laser, Alexandrite laser, and Ti: Sapphire laser.

33. A method of manufacturing a semiconductor device according to claim 28, wherein the laser oscillator is one of a continuous oscillation Ar laser or Kr laser.

34. A method of manufacturing a semiconductor device according to claim 28, wherein the laser light is a harmonic wave.

35. A method of manufacturing a semiconductor device comprising:

forming an amorphous semiconductor film over a substrate; and

scanning a surface of the amorphous semiconductor film with a laser light whose beam spot on the surface to be irradiated has a line shape or an elliptical shape beam spot,

wherein the shape of the beam spot is kept constant during the scanning, and

wherein the scanning speed of the laser light is changed.

36. A method of manufacturing a semiconductor device according to claim 35, wherein the shape of the laser light is kept constant by adjusting a focal point of the laser light on the surface to be irradiated.

37. A method of manufacturing a semiconductor device according to claim 35, wherein the scanning speed of the laser light is determined based on an energy distribution obtained by a means for focusing the laser light.

38. A method of manufacturing a semiconductor device according to claim 35, wherein the scanning speed of the laser light is changed so that an irradiation energy on the surface to be irradiated is homogenized.

39. A method of manufacturing a semiconductor device according to claim 35, wherein the laser oscillator is a continuous oscillation solid laser.

40. A method of manufacturing a semiconductor device according to claim 35, wherein the laser oscillator is at least one selected from the group consisting of a continuous oscillation YAG laser, YVO_4 laser, YLF laser, $YAlO_3$ laser, Y_2O_3 laser, Alexandrite laser, and Ti: Sapphire laser.

41. A method of manufacturing a semiconductor device according to claim 35, wherein the laser oscillator is one of a continuous oscillation Ar laser or Kr

laser.

42. A method of manufacturing a semiconductor device according to claim 35, wherein the laser light is a harmonic wave.

43. A method of manufacturing a semiconductor device comprising:

forming an amorphous semiconductor film over a substrate; and

converting a laser light emitted from a laser oscillator so that a beam spot on a surface of the amorphous semiconductor film becomes a line shape or an elliptical shape beam spot,

deflecting a converted laser light and scanning the laser light while keeping the shape of laser light constant on the surface to be irradiated;

wherein a scanning speed of the laser light is changed by controlling an operating speed of the deflecting means.

44. A method of manufacturing a semiconductor device according to claim 43, wherein the means for deflecting the converted laser light and the means for scanning while keeping the deflected laser light constant has at least one of a galvanometer mirror, a polygon mirror, an fθ lens, and a telecentric fθ lens.

45. A method of manufacturing a semiconductor device according to claim 43, wherein the shape of the laser light is kept constant by adjusting a focal point of the laser light on the surface to be irradiated.

46. A method of manufacturing a semiconductor device according to claim 43, wherein the scanning speed of the laser light is determined based on an energy distribution obtained by a means for focusing the laser light.

47. A method of manufacturing a semiconductor device according to claim 43, wherein the scanning speed of the laser light is changed so that an irradiation

energy on the surface to be irradiated is homogenized.

48. A method of manufacturing a semiconductor device according to claim 43, wherein the laser oscillator is a continuous oscillation solid laser.

49. A method of manufacturing a semiconductor device according to claim 43, wherein the laser oscillator is at least one selected from the group consisting of a continuous oscillation YAG laser, YVO_4 laser, YLF laser, $YAlO_3$ laser, Y_2O_3 laser, Alexandrite laser, and Ti: Sapphire laser.

50. A method of manufacturing a semiconductor device according to claim 43, wherein the laser oscillator is one of a continuous oscillation Ar laser or Kr laser.

51. A method of manufacturing a semiconductor device according to claim 43, wherein the laser light is a harmonic wave.